



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,309	03/16/2004	William E. Italia	GP-304136 (2760/144)	1978

7590 12/19/2008  
General Motors Corporation  
Legal Staff, Mail Code 482-C23-B21  
300 Renaissance Center  
P.O. Box 300  
Detroit, MI 48265-3000

EXAMINER
----------

HOLLIDAY, JAIME MICHELE

ART UNIT	PAPER NUMBER
----------	--------------

2617

MAIL DATE	DELIVERY MODE
-----------	---------------

12/19/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/801,309  
Filing Date: March 16, 2004  
Appellant(s): ITALIA ET AL.

---

Phillip M. Pippenger  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed September 19, 2008 appealing from the Office action mailed February 21, 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,876,855	Howe	4-2005
5,802,468	Gallant et al.	9-1998

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. **Claims 1-5 and 7-15** are rejected under 35 U.S.C. 102(e) as being anticipated by **Howe (US 6,879,855 B1)**.

Consider **claim 1**, Howe clearly shows and discloses a system for optimizing the routing of a call originated from a land-based terminal **43** to a **wireless mobile terminal 47**, reading on the claimed “**wireless mobile communication device**,” utilizing the interaction between a server controlled Internet protocol network and the home location register (HLR) **53** of the mobile terminal. In response to a call request by the server, the HLR identifies the visited location register (VLR) **57** in contact with the mobile terminal and obtains a temporary local directory number (TLDN) of the local serving switch in contact with a mobile data unit connected to the mobile terminal. The server uses the TLDN to reach a data unit on the network, which is used to place a local call over the public switched telephone network (PSTN) to the serving switch, reading on the claimed, “method for assigning a mobile dialing number (MDN) to a wireless mobile communication device (MCD) for providing local call access to the MCD from a base address for the MCD,” (abstract), the method comprising: searching the internal database of the **HLR to determine the VLR last in contact** with the mobile terminal,

Art Unit: 2617

reading on the claimed “***selecting a wireless rate center encompassing the base address*** and having an MDN providing local call access to the MCD from the base address for the MCD,” (column 3 lines 37-39); and sending a routing request from the HLR to the VLR, and the ***VLR determining that a call is deliverable and allocating a TLDN from a pool of numbers whose geographic base is the serving switch 63 in communication with the mobile terminal***, reading on the claimed “***assigning the MDN providing local calling access to the MCD from the base address for the MCD***, in the selected wireless rate center encompassing the base address, to the MCD,” (column 4 lines 28-33).

Consider **claim 2**, and **as applied to claim 1 above**, Howe further discloses the home mobile switch **19** passes the TLDN on to a second public switch telephone network/inter-exchange carrier switches (PSTN/IXC) **37** for delivery to the serving switch associated with the VLR where the mobile unit is located. The VLR associates the TLDN allocated with the mobile data unit and passes the information back to the serving switch, reading on the claimed “activating the assigned MDN,” (column 3 lines 9-15).

Consider **claim 3**, and **as applied to claim 2 above**, Howe further discloses the TLDN is returned to the HLR in to response to the routing request, then is forwarded to the network server as a response to a location request for the mobile terminal, reading on the claimed “configuring the MCD for operation with the assigned MDN,” (column 4 lines 32-35).

Consider **claim 4**, and **as applied to claim 1 above**, Howe further discloses the HLR searches its internal database for the VLR in contact with the mobile terminal, which then identifies the switch in communication with the mobile terminal that will connect the incoming call to the data unit associated with the mobile terminal, reading on the claimed "compiling a database defining geographic boundaries of a plurality of wireless rate centers", and selecting the wireless rate center of claim 1 from the database," (column 3 lines 37-39, column 4 lines 29-33, 65-67). The VLR, reading on the claimed "wireless rate center," stored in the database determines the serving switch which is the geographic location of the mobile terminal.

Consider **claim 5**, and **as applied to claim 4 above**, Howe further discloses that the network server chooses an appropriate data unit **70** from the pool that is local to the physical location of the mobile terminal, by using the ***NPA-NXX number format of the TLDN*** and comparing it with the phone number connection between the data unit and its connection to the PSTN/IXC, reading on the claimed "converting the base address to a geographic location and selecting the wireless rate center from those wireless rate centers in the database having geographic boundaries encompassing the geographic location of the base address," (column 4 lines 52-57).

Consider **claim 7**, and **as applied to claim 1 above**, Howe further discloses the HLR searches its internal database to determine the VLR last in contact with the mobile terminal, reading on the claimed "selecting the wireless rate center prior to contacting a wireless service provider," (column 3 lines 37-39). The HLR contacts the VLR and asks for the identity of the serving switch last in contact with the mobile terminal, reading on

Art Unit: 2617

the claimed “transmitting a designation of the selected wireless rate center to a wireless service provider for assignment of the MDN by the wireless service provider,” (column 3 lines 39-41). The HLR selects the VLR before contacting the VLR which functions as the current “service provider” of the mobile terminal.

Consider **claim 8**, and **as applied to claim 7 above**, Howe further discloses that the VLR allocates a TLDN from a pool of numbers whose geographic base is the serving switch in communication with the mobile terminal. The TLDN is returned to the HLR that forwards it to the network server, reading on the claimed “assigning the MDN and transmitting the assigned MDN to an entity other than the wireless service provider for configuring the MCD for operation with the assigned MDN,” (column 4 lines 30-35).

Consider **claim 9**, and **as applied to claim 7 above**, Howe further discloses that the serving switch sending a routing request to the VLR which the associates the TLDN with the data unit **51** connected to the mobile terminal and passes its mobile identification number (MIN) in response to the routing request from the HLR, reading on the claimed “transmitting a serial number of the MCD to the wireless service provider together with the designation of the selected wireless rate center,” (column 4 lines 62-65).

Consider **claim 10**, and **as applied to claim 9 above**, Howe further discloses that in order to identify the mobile terminal, the server associates the identity of the mobile terminal with the MIN of the mobile data unit it is connected to. To establish a data connection between the land-based terminal and the mobile terminal, the server sends a location request to the HLR associated with the data unit, reading on the

Art Unit: 2617

claimed “assigning the MDN and transmitting the serial number, together with the assigned MDN, to an entity other than the wireless service provider for configuring the MCN for operation with the assigned MDN,” (column 4 lines 12-15 and 19-23).

Consider **claim 11**, Howe clearly shows and discloses a system for optimizing the routing of a call originated from a land-based terminal to a wireless mobile terminal, reading on the claimed “wireless mobile communication device,” utilizing the interaction between a server controlled Internet protocol network and the HLR of the mobile terminal. In response to a call request by the server, the HLR identifies the VLR in contact with the mobile terminal and obtains a TLDN of the local serving switch in contact with a mobile data unit connected to the mobile terminal. The server uses the TLDN to reach a data unit on the network, which is used to place a local call over the PSTN to the serving switch, reading on the claimed, “apparatus for assigning a mobile dialing number (MDN) to a wireless mobile communication device (MCD) for providing local call access to the MCD from a base address for the MCD,” (abstract), the apparatus comprising: the HLR searching its the internal database to determine the VLR last in contact with the mobile terminal, reading on the claimed “means for selecting a wireless rate center encompassing the base address and having an MDN providing local call access to the MCD from the base address for the MCD,” (column 3 lines 37-39); and the HLR sending a routing request to the VLR, and the VLR determining that a call is deliverable and allocating a TLDN from a pool of numbers whose geographic base is the serving switch in communication with the mobile terminal, reading on the claimed “means for assigning the MDN providing local calling access to



the MCD from the base address for the MCD, in the selected wireless rate center encompassing the base address, to the MCD,” (column 4 lines 28-33).

Consider **claim 12**, and **as applied to claim 11 above**, Howe further discloses the HLR searches its internal database for the VLR in contact with the mobile terminal, which then identifies the switch in communication with the mobile terminal that will connect the incoming call to the data unit associated with the mobile terminal, reading on the claimed “database defining geographic boundaries of a plurality of wireless rate centers, and means for selecting the wireless rate center of claim 11 from the database,” (column 3 lines 37-39, column 4 lines 29-33, 65-67). The VLR, reading on the claimed “wireless rate center,” stored in the database determines the serving switch which is the geographic location of the mobile terminal.

Consider **claim 13**, and **as applied to claim 12 above**, Howe further discloses that the network server chooses an appropriate data unit from the pool that is local to the physical location of the mobile terminal, by using the NPA-NXX number format of the TLDN and comparing it with the phone number connection between the data unit and its connection to the PSTN/IXC, reading on the claimed “means for converting the base address to a geographic location and selecting the wireless rate center from those wireless rate centers in the database having geographic boundaries encompassing the geographic location of the base address,” (column 4 lines 52-57).

Consider **claim 14**, and **as applied to claim 11 above**, Howe further discloses the HLR searches its internal database to determine the VLR last in contact with the mobile terminal, reading on the claimed “means for selecting the wireless rate center

Art Unit: 2617

prior to contacting a wireless service provider,” (column 3 lines 37-39). The HLR contacts the VLR and asks for the identity of the serving switch last in contact with the mobile terminal, reading on the claimed “means for transmitting a designation of the selected wireless rate center to a wireless service provider for assignment of the MDN by the wireless service provider,” (column 3 lines 39-41). The HLR selects the VLR before contacting the VLR which functions as the current “service provider” of the mobile terminal.

Consider **claim 15**, and **as applied to claim 11 above**, Howe further discloses that the VLR allocates a TLDN from a pool of numbers whose geographic base is the serving switch in communication with the mobile terminal. The TLDN is returned to the HLR that forwards it to the network server, reading on the claimed “means for assigning the MDN and transmitting the assigned MDN to an entity other than the wireless service provider for configuring the MCD for operation with the assigned MDN,” (column 4 lines 30-35).

### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

Art Unit: 2617

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Howe (US 6,879,855 B1)** in view of **Gallant et al. (US 5,802,468)**.

Consider **claim 6**, and **as applied to claim 5**, Howe clearly shows and discloses the claimed invention except that the geographic locations of the data units, HLR, VLR or mobile terminal are not disclosed in terms of latitude and longitude.

In the same field of endeavor, Gallant et al. clearly show and disclose a method for providing different levels of mobile communication service within a communication system service area. A first level of service is provided to a mobile station when it is inside the home calling area, reading on the claimed "local call access." A plurality of base transceiver stations (BTSs), each having a cellular service area for communication with a mobile station, are coupled to a common database that has a memory for storing data related to a home geographical location associated with a mobile station, reading on the claimed "MCD," (abstract). A home calling area is a geographical region that can be described in units of distance around a subscriber's home geographical location, reading on the claimed "geographic location of a base address." A local calling area covers an area larger than a home calling area which could be a predetermined geographic area having city or county lines as boundaries, reading on the claimed "geographic boundaries of the wireless rate centers," (column 7 lines 14-25). Each BTS

Art Unit: 2617

sends out a broadcast message that includes grid coordinate information such as identifier fields defining the geographical location of the BTS, for example, the latitude and longitude location of the BTS, reading on the claimed “defining the geographic boundaries of the wireless rate centers, and the geographic location of the base address in terms of latitude and longitude,” (column 10 lines 12-15).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include the latitude and longitude coordinates as taught by Gallant et al. in the system of Howe, in order to locate the switches and VLRs to make a local call from a land-based terminal to a wireless mobile terminal.

#### **(10) Response to Argument**

Appellants basically argue that Howe fails to teach a step of assigning a local (particular) number to a mobile unit (device itself). Appellants further argue the conclusion that Examiner arrives regarding associating a mobile terminal with the MIN of a data unit is not related to the claimed invention. “Further, assigning the TLDN to route a call is irrelevant, and does not change the mobile phone’s number”. Also, Appellants argue that the data unit of the Howe reference calls the mobile unit via the mobile units own assigned number and not the data unit's local number.

Examiner respectfully disagrees with Appellants arguments. Examiner argued in the previous Office Action dated February 21, 2008 that the claims failed to explicitly recite “assigning the local dialing number to the mobile device.” Appellant cited that claim 1 recites verbatim “...assigning the MDN providing local calling access to the

Art Unit: 2617

MCD...” Examiner maintains that these statements do not expressly recite the same subject matter. As cited, the claim reads that a number is assigned to the mobile device that provides a local connection. The Howe reference teaches providing a local connection instead of a long-distance connection (col. 5, lines 18-20). Examiner maintains that Howe teaches (“...assigning the MDN [mobile dialing number]...to the MCD [mobile communication device]...”). A data unit (51) connected to a mobile terminal (MCD). The VLR associates allocated TLDN with the data unit (51), and the MIN is passed with the response to a routing request. Server 49 associates the identity of the mobile terminal with the MIN if the mobile data unit 51 it is connected to, wherein it is not conclusive that the system uses this information to identify and route calls to the mobile terminal (col. 4, lines 9-18). The serving switch has a TLDN and the data unit has a TLDN whose structure is NPA-NXXX. The TLDN of that data unit reads on the “assigned MDN,” since the mobile terminal is associated with and identified by the data unit it is currently connected to. Further, the claim language is silent with regards to a permanent change or conversion of the actual phone number of the mobile terminal for local calling access. Since the mobile terminal is associated with the MIN of the data unit, which is connected to the mobile terminal and has phone capabilities, the assigned TLDN to the data unit will be used to route the call to the mobile phone.

In response to applicant's argument that Howe has a different effect and goal from the information, Examiner contends that the applied prior art need only anticipate the limitations and not the same motivation or solve the same problem.

Appellants also argue that claims 11-15 are written in means-plus function format, were not treated under U.S.C. 112, paragraph 6, and therefore a prima facie case of unpatentability was never presented by the Examiner during prosecution. Examiner respectfully disagrees with Appellants arguments. According to the specification page 8, lines 21-37, “the apparatus **10** includes hardware and/or software in the MCD, MCS, WRC, or operated by the WSP, for performing operations including but not limited to: selecting a wireless rate center WRC encompassing the base address BA and having an MDN providing local call access to the MCD from the base address for the MCD; assigning the MDN to the MCD, to thereby provide local calling access to the MCD from the base address for the MCD; activating the MDN; and for configuring the MCD for operation with the assigned MDN.” Therefore, the means to perform the above-mentioned functions are implemented in the mobile communication system or the wireless service provider. The elements and entities of the mobile/wireless/cellular communication system are well known in the art. The Home Location Register and the Visited Location Register are known components in a cellular telecommunications system (col. 4, lines 37-45). The HLR reads on “means for selecting a wireless rate center encompassing the base address and having an MDN providing local call access to the MCD from the base address for the MCD,” and the VLR reads on “means for assigning the MDN providing local calling access to the MCD from the base address for the MCD, in the selected wireless rate center encompassing the base address, to the MCD.”

Art Unit: 2617

Therefore, in view of the previous action and above, the prior art of record, Howe and Gallant et al., clearly show and disclose the claimed limitations, and establish a *prima facie* case of obviousness.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Jaime M Holliday/

Examiner, Art Unit 2617

Conferees:

/George Eng/  
Supervisory Patent Examiner, Art Unit 2617

/Charles N. Appiah/  
Supervisory Patent Examiner, Art Unit 2617